

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-17 are presently pending in this application, Claims 1 and 15-17 having been amended by the present amendment.

In the outstanding Office Action, Claims 1-16 were rejected under 35 U.S.C. §103(a) as being anticipated by Tybinkowski et al. (U.S. Patent 5,982,844A) in view of Swain et al. (U.S. Patent 5,448,608); and Claim 17 was rejected under 35 U.S.C. §103(a) as being unpatentable over Tybinkowski et al.

Claims 1 and 15-17 have been amended herein. The claim amendments to Claims 1, 16 and 17 are supported by Claim 15, and Claim 15 has been amended to be consistent with amended Claim 1. Hence, no new matter has been added thereby.

Briefly, Claim 1 of the present invention is directed to a gantry of an X-ray computer tomography apparatus including an X-ray tube, an X-ray detector, a rotation ring mounting the X-ray tube and said X-ray detector, a ring frame rotatably supporting the rotation ring, a base, a plurality of main posts vertically mounted on the base and supporting the ring frame such that the rotation ring is positioned between the main posts, a plurality of props for reinforcing the main posts, and at least one electric member positioned in a space surrounded by the base, main posts and props, the at least one electric member including at least one of a power source unit configured to generate driver power to rotate the rotation ring and tilt the ring frame, a scan control unit configured to control a rotating operation of the rotation ring and a detecting operation of the X-ray detector, and a transmission unit configured to externally output a signal detected by the X-ray detector. By providing at least one electric member as such, the gantry of an X-ray computer tomography apparatus according to the

present invention creates a lower center of gravity and becomes more compact, thereby improving its stability.¹

Tybinkowski et al. disclose a CT scanner drive system and bearing. However, Tybinkowski et al. do not teach at least one electric member positioned in a space surrounded by the base, main posts and props, the at least one electric member including at least one of a power source unit configured to generate driver power to rotate the rotation ring and tilt the ring frame, a scan control unit configured to control a rotating operation of the rotation ring and a detecting operation of the X-ray detector, and a transmission unit configured to externally output a signal detected by the X-ray detector, as recited in Claim 1. On the contrary, Tybinkowski et al. disclose the disk 30 mounted in front of the vertical frame 32 via the frame spacers 52, and the electric members positioned outside the vertical frame 32.² Therefore, the structure recited in Claim 1 is believed to be distinguishable from Tybinkowski et al.

Similarly, Swain et al. disclose a CT scanner, but do not disclose at least one electric member positioned in a space surrounded by the base, main posts and props, the at least one electric member including at least one of a power source unit configured to generate driver power to rotate the rotation ring and tilt the ring frame, a scan control unit configured to control a rotating operation of the rotation ring and a detecting operation of the X-ray detector, and a transmission unit configured to externally output a signal detected by the X-ray detector, as recited in Claim 1. Thus, the structure recited in Claim 1 is also believed to be distinguishable from Swain et al.

¹ Specification, page 9, lines 8-15.

² See, for example, Tybinkowski et al., Figure 2.

Since neither Tybinkowski et al. nor Swain et al. disclose the at least one electric member as recited in Claim 1, Tybinkowski et al. and Swain et al. would not render the structure recited in Claim 1 obvious.

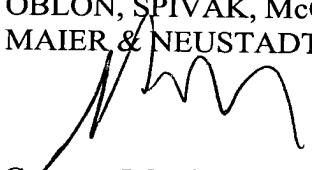
Likewise, independent amended Claims 16 and 17 include subject matter substantially similar to what is recited in Claim 1 to the extent discussed above. Thus, Claims 16 and 17 are also believed to be distinguishable from Tybinkowski et al. and Swain et al.

For the foregoing reasons, Claims 1, 16 and 17 are believed to be allowable. Furthermore, since Claims 2-15 ultimately depend from Claim 1, substantially the same arguments set forth above also apply to these dependent claims. Hence, Claims 2-15 are believed to be allowable as well.

In view of the amendments and discussions presented above, Applicant respectfully submits that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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IN THE CLAIMS

Please amend Claims 1 and 15-17 as follows:

--1. (Thrice Amended) A gantry of an X-ray computer tomography apparatus comprising:

an X-ray tube;

an X-ray detector;

a rotation ring mounting said X-ray tube and said X-ray detector;

a ring frame rotatably supporting said rotation ring;

a base;

a plurality of main posts vertically mounted on said base and supporting said ring frame such that said rotation ring is positioned between said main posts; [and]

a plurality of props [jointing to said main posts obliquely to reinforce] for reinforcing said main posts; and

at least one electric member positioned in a space surrounded by said base, main posts and props, said at least one electric member including at least one of a power source unit configured to generate driver power to rotate said rotation ring and tilt said ring frame, a scan control unit configured to control a rotating operation of said rotation ring and a detecting operation of said X-ray detector, and a transmission unit configured to externally output a signal detected by said X-ray detector.

15. (Amended) A gantry according to claim 1, [further comprising] wherein said at least one electric member comprises a plurality of electric members including [a] said power source unit [for generating drive power to rotate the rotation ring and tilt the ring frame], [a] said scan control unit [for controlling a rotating operation of the rotation ring and a detecting operation of the X-ray detector], and [a] said transmission unit [for externally outputting a signal detected by the X-ray detector, the electric members being arranged in spaces defined by the base, the main posts and the props].

16. (Thrice Amended) A gantry of an X-ray computer tomography apparatus comprising:

an X-ray tube;

an X-ray detector;

a rotation ring mounting said X-ray tube and said X-ray detector;

a ring frame rotatably supporting said rotation ring;

a base;

a plurality of main posts vertically mounted on said base and supporting said ring frame such that said rotation ring is positioned between said main posts; and

a plurality of reinforce members for reinforcing said main posts; and

at least one electric member positioned in a space surrounded by said base, main posts and reinforce members, said at least one electric member including at least one of a power source unit configured to generate driver power to rotate said rotation ring and tilt said ring frame, a scan control unit configured to control a rotating operation of said rotation ring and a detecting operation of said X-ray detector, and a transmission unit configured to externally output a signal detected by said X-ray detector.

17. (Thrice Amended) A gantry of an X-ray computer tomography apparatus comprising:

an X-ray tube;

an X-ray detector;

a rotation ring mounting said X-ray tube and said X-ray detector;

a ring frame rotatably supporting said rotation ring;

a base;

a plurality of main posts vertically mounted on said base and supporting said ring frame such that said rotation ring is positioned between said main posts; and

a plurality of triangle blocks configured to reinforce said main posts; and

at least one electric member positioned in a space surrounded by said base, main posts and triangle blocks, said at least one electric member including at least one of a power source unit configured to generate driver power to rotate said rotation ring and tilt said ring frame, a scan control unit configured to control a rotating operation of said rotation ring and a detecting operation of said X-ray detector, and a transmission unit configured to externally output a signal detected by said X-ray detector.--